Journal of Pharmacokinetics and Biopharmaceutics

Vol. 24, No. 1 **February 1996**

CONTENTS

In Vivo Relationships Between the Cerebral Pharmacokinetics and Pharmacodynamics of Thiopentone in Sheep After Short-Term Administration 1
Richard N. Upton, Guy L. Ludbrook, Cliff Grant, and Elke C. Gray

The Kinetics of Continuously Infused Indocyanine Green in the Pig 19
Peter Ott, Ludvik Bass, and Susanne Keiding

An Extended Pharmacokinetic/Pharmacodynamic Model Describing Quantitatively the Influence of Plasma Protein Binding, Tissue Binding, and Receptor Binding on the Potency and Time Course of Action of Drugs 45
Johannes H. Proost, J. Mark K. H. Wierda, and Dirk K. F. Meijer

PHARMACOMETRICS

Multiple Solutions, Illegal Parameter Values, Local Minima of the Sum of Squares, and Anomalous Parameter Estimates in Least-Squares Fitting of the Two-Compartment Pharmacokinetic Model with Absorption 79
R. D. Purves

Bayesian Individualization via Sampling-Based Methods 103
Jon Wakefield

COMMENTARY

Towards a Practical Strategy for Assessing Individual Bioequivalence 133
Robert Schall and Roger L. Williams

ANNOUNCEMENTS 151

Journal of Pharmacokinetics and Biopharmaceutics

Vol. 24, No. 2 **April 1996**

CONTENTS

A Population Pharmacokinetic Model for Docetaxel (Taxotere®): Model Building and Validation 153
René Bruno, Nicole Vivier, Jean Claude Vergniol, Susan L. De Phillips, Guy Montay, and Lewis B. Sheiner

Tissue Distribution Kinetics as Determinant of Transit Time Dispersion of Drugs in Organs: Application of a Stochastic Model to the Rat Hindlimb 173
Michael Weiss and Michael S. Roberts

Pulmonary Distribution of Alfentanil and Sufentanil Studied with System Dynamics Analysis 197
Fred Boer, Andreas Hoeft, Martin Scholz, James G. Bovill, Antoin G. L. Burm, and Adrie Hak

Hepatic Conjugation/Deconjugation Cycling Pathways. Computer Simulations Examining the Effect of Michaelis-Menten Parameters, Enzyme Distribution Patterns, and a Diffusional Barrier on Metabolite Disposition 219
Steven B. Hansel and Marilyn E. Morris

PHARMACOMETRICS

Comparison of Some Practical Sampling Strategies for Population Pharmacokinetic Studies 245
E. Niclas Jonsson, Janet R. Wade, and Mats O. Karlsson

Journal of Pharmacokinetics and Biopharmaceutics

Vol. 24, No. 3 **June 1996**

CONTENTS

PHARMACOMETRICS

Do We Need Full Compliance for Population Pharmacokinetic Analysis? 265
Pascal Girard, Lewis B. Sheiner, Helen Kastrissios, and Terrence F. Blaschke

A Comparison of Six Deconvolution Techniques 283
Francis N. Madden, Keith R. Godfrey, Michael J. Chappell, Roman Hovorka, and Ronald A. Bates

NOTE

Parameter Identifiability Is Required in Pooled Data Methods 301
John A. Jacquez

ANNOUNCEMENTS 307

Journal of Pharmacokinetics and Biopharmaceutics

Vol. 24, No. 4 August 1996

CONTENTS

Bioequivalence Assessment of Etoposide Phosphate and Etoposide Using Pharmacodynamic and Traditional Pharmacokinetic Parameters 313
Vanaja Mummaneni, Sanjeev Kaul, Linus N. Igwemezie, David R. Newell, David Porter, Huw Thomas, A. Hilary Calvert, Benjamin Winograd, and Rashmi H. Barbhaiya

Pharmacodynamic Analysis of Contractile Potentiation by Cholinesterase Inhibitors in Rats 327
Koujirou Yamamoto, Yasufumi Sawada, and Tatsuji Iga

Tubular Transport Mechanisms of Quinapril and Quinaprilat in the Isolated Perfused Rat Kidney: Effect of Organic Anions and Cations 349
Alan R. Kugler, Stephen C. Olson, and David E. Smith

Pharmacokinetic Considerations of Regional Administration and Drug Targeting: Influence of Site of Input in Target Tissue and Flux of Binding Protein 369
Malcolm Rowland and Andrew McLachlan

PHARMACOMETRICS

Volumes of Distribution and Mean Residence Time of Drugs with Linear Tissue Distribution and Binding and Nonlinear Protein Binding 389
Haiyung Cheng and William R. Gillespie

A Comparison of a Bayesian Population Method with Two Methods as Implemented in Commercially Available Software 403
J. E. Bennett and J. C. Wakefield

COMMENTARY

New Perspectives on the Theory of Permeability and Resistance in the Study of Drug Transport and Absorption 433
Win L. Chiou

ANNOUNCEMENTS 443

Journal of Pharmacokinetics and Biopharmaceutics

Vol. 24, No. 5 October 1996

Special Issue: Enzymes of Drug Metabolism: Importance to Drug Safety and Efficacy

CONTENTS

Overview of Enzymes of Drug Metabolism 449
Urs A. Meyer

The Human Drug Metabolizing Cytochromes P450 461
Steven A. Wrighton, Mark VandenBranden, and Barbara J. Ring

Cytochrome P4503A (CYP3A) Metabolism: Prediction of *In Vivo* Activity in Humans 475
Grant R. Wilkinson

The Novel *UGT1* Gene Complex Links Bilirubin, Xenobiotics, and Therapeutic Drug Metabolism by Encoding UDP-Glucuronosyltransferase Isozymes with a Common Carboxyl Terminus 491
Ida S. Owens, Joseph K. Ritter, Matthew T. Yeatman, and Fan Chen

N-Acetyltransferases: Pharmacogenetics and Clinical Consequences of Polymorphic Drug Metabolism 509
Stephen P. Spielberg

In Vitro Techniques for Studying Drug Metabolism 521
F. Peter Guengerich

Journal of Pharmacokinetics and Biopharmaceutics

Vol. 24, No. 6 December 1996

CONTENTS

Pharmacokinetics of Eltanolone Following Bolus Injection and Constant Rate Infusion 535
Kourosh Parivar, Arne Wessén, Marianne Widman, and Anders Nilsson

Pharmacokinetics and Pharmacodynamics of Azosemide After Intravenous and Oral Administration to Rats: Absorption from Various GI Segments 551
Sun H. Lee and Myung G. Lee

Use of Parallel Erlang Density Functions to Analyze First-Pass Pulmonary Uptake of Multiple Indicators in Dogs 569
T. C. Krejcie, J. A. Jacquez, M. J. Avram, Ç. U. Niemann, C. A. Shanks, and T. K. Henthorn

Experimental Design and Estimation of Parameters in Complex Radioligand Binding Systems 589
Carl-Michael Staschen and Louis D. Homer

Characterization of Four Basic Models of Indirect Pharmacodynamic Responses 611
Amarnath Sharma and William J. Jusko

On the Recording of Sample Times and Parameter Estimation from Repeated Measures Pharmacokinetic Data 637
He Sun, Ene I. Ette, and Thomas M. Ludden

A Note on Testing Areas Under the Curve when Using Destructive Measurement Techniques 651
Harald Heinzl

ANNOUNCEMENTS 657

AUTHOR INDEX TO VOLUME 24 663

SUBJECT INDEX TO VOLUME 24 665